

FRANKEL ET AL. - 09/503,181
Client/Matter: 061047-0265650

REMARKS

In this Amendment, claims 1, 13, 16, 28-31, 34 and 52 are amended merely to recite the subject matter without any intention of narrowing the scope of any of the claims and new dependent claims 64-67 are added. Applicants have amended the currently pending claims in order to expedite prosecution and do not, by this Amendment, intend to abandon subject matter of the claims as originally filed or later presented, and reserve the right to pursue such subject matter in a continuing application. No new matter has been added. Claims 1-4, 6-54, and 56-67 are pending in this patent application. Reconsideration of the rejection in view of the remarks below is requested.

Rejection under 35 U.S.C. §101

The Office Action rejected claims 1-63 under 35 U.S.C. §101. Specifically, the Office Action argues that the claims fail to produce a tangible, or concrete result, and thus are non-statutory.

At the outset, Applicants point out that Examiner has previously rejected claims 1-15 under 35 U.S.C. §101 and then withdrew that rejection in the Office Action mailed June 17, 2004 in view of Applicants' arguments presented on March 29, 2004. Each Office Action should be complete as to all matters. *See* 37 C.F.R. §1.104(b) and M.P.E.P., section 707.07. Thus, Applicants respectfully submit that the Examiner appears to be resurrecting the rejection that he previously withdrew. Accordingly, Applicants object that the Examiner is engaging in piecemeal examination contrary to U.S. Patent Office practice guidelines. *See, e.g.,* 37 C.F.R. §1.104(b) and M.P.E.P., section 707.7(g).

In any event, Applicants submit that claims 1-63 define patentable subject matter. Independent claim 1 is at least patentable as a new and useful process as provided in 35 U.S.C. §101, more specifically a patentable method for control and maintenance of an operational organizational structure, involving cryptographic control and maintenance of entities within one or more organizations, the method being automated using a computing device. Further, independent claim 16 is at least patentable as a new and useful machine or manufacture as provided in 35 U.S.C. §101, more specifically a system for control and maintenance of an operational structure involving at least one cryptographic method, entities

FRANKEL ET AL. -- 09/503,181
Client/Matter: 061047-0265650

within organizations, characteristics of said entities and relationships between said entities, wherein the system comprises code executable by a computing device. Independent claim 52 is at least patentable as a new and useful machine or manufacture as provided in 35 U.S.C. §101, more specifically a database system representing an organization involving directories representing entities, their characteristics, roles, and relationships together with their associations with cryptographic capabilities, the database system comprising the certain transactional components. The claims that depend from claims 1, 16, and 52 are patentable at least for the same reasons.

In addition, the Examiner argues that claims 1-63 fail to accomplish a practical application, that is they fail to produce "a useful, concrete and tangible result." Applicants respectfully disagree.

Referring to claim 1, Applicants submit that the claimed invention therein achieves a "a useful, concrete and tangible result." For example, the claimed invention yields a useful, concrete and tangible result of control and maintenance of an operational organizational structure. Applicants' fail to understand how control and maintenance of the operational structure of an organization, such as a corporation or a partnership, or a plurality of organizations, such as an inter-banking organization or a consortium, is not useful, concrete and tangible. Clearly, such control and maintenance is useful and Examiner admits as much. With respect to whether there is a concrete and tangible result, Applicants submit that claim 1 is not an abstract algorithm that yields an abstract result. Rather, it is a method of manipulating electronic representations of elements and associations of an organization to control and maintain the real or concrete structure of the organization. Applicants' submit that there is simply no legal, conceptual or tangible difference between the patentable subject matter in *State Street Bank v. Signature Financial Group*, 149 F.3d 1368 (Fed. Cir. 1998) where the useful, concrete and tangible result was "expressed in numbers representing price, profit, percentage, cost or loss" and the concrete and tangible result of control and maintenance of an operational organization structure through manipulation of electronic representations of elements and associations of the organization as recited in claim 1. This result is concrete -- an actual, specific thing or instance -- and tangible -- perceptible. The Examiner's arguments are simply inapposite as they are divorced from the actual claim language as understood in the context of Applicants' specification and drawings.

FRANKEL ET AL. -- 09/503,181
Client/Matter: 061047-0265650

Referring to claim 16, Applicants submit that the claimed invention therein achieves a "a useful, concrete and tangible result" of, for example, control and maintenance of an operational structure involving at least one cryptographic method, entities within organizations, characteristics of said entities and relationships between said entities. Like the discussion above with respect to claim 1 above, such control and maintenance is useful and Examiner admits as much. With respect to whether there is a concrete and tangible result, Applicants submit that claim 16 is not a device or manufacture that yields an abstract result. Rather, it is a system configured to manipulate electronic representations of elements and associations of an organization to control and maintain a real or concrete operational structure. Applicants' submit that there is simply no legal, conceptual or tangible difference between the patentable subject matter in *State Street Bank v. Signature Financial Group*, 149 F.3d 1368 (Fed. Cir. 1998) where the useful, concrete and tangible result was "expressed in numbers representing price, profit, percentage, cost or loss" and the concrete and tangible result of control and maintenance of an operational structure through manipulation of electronic representations of elements and associations of an organization as recited in claim 16.

Referring to claim 52, Applicants submit that the claimed invention therein achieves a "a useful, concrete and tangible result" of, for example, maintenance of cryptographic capabilities and a database representing an organization involving directories representing entities, their characteristics, roles and relationships together with their associations with cryptographic capabilities in coordination and by authorized parties assuring the representation of said organization and maintenance of a view representing an organization. Clearly, this is a useful result. Moreover, Applicants submit it is a concrete and tangible result. Claim 52 does not merely recite a device or manufacture that yields an abstract result. This result is concrete – an actual, specific thing or instance – and tangible – perceptible. As noted above, Applicants' submit that there is simply no legal, conceptual or tangible difference between the patentable subject matter in *State Street Bank v. Signature Financial Group*, 149 F.3d 1368 (Fed. Cir. 1998) where the useful, concrete and tangible result was "expressed in numbers representing price, profit, percentage, cost or loss" and the concrete and tangible result of maintenance of cryptographic capabilities and a database representing an organization involving directories representing entities, their characteristics, roles and

FRANKEL ET AL. -- 09/503,181
Client/Matter: 061047-0265650

relationships together with their associations with cryptographic capabilities in coordination and by authorized parties assuring the representation of said organization and maintenance of a view representing an organization using the transactional components as recited in claim 52.

Claims 2-4, 6-15, and 64-65 depend from claim 1, claims 17-51 and 66-67 depend from claim 16, and claims 53-54 and 56-63 depend from claim 52 and are therefore patentable subject matter at least for the reasons set forth above with respect to claims 1, 16 and 52, respectively. Accordingly, for at least the above reasons, the rejection of the claims under 35 U.S.C. §101 is traversed and claims 1-4, 6-54, and 56-67 are believe to be allowable.

Rejection under 35 U.S.C. §112

The Office Action rejected claims 1-63 under 35 U.S.C. §112, first paragraph as failing to comply with the enablement requirement. Specifically, Examiner argues that "the specification fails to illustrate how the method for control and maintenance of an operational organization structure is electronically implemented." Applicants respectfully traverse the rejection.

As a preliminary matter, per M.P.E.P. §707.07(d), Applicant notes that a plurality of claims should never be grouped together in a common rejection, unless that rejection is equally applicable to all claims in the group. Applicant points out that the rejection based on 35 U.S.C. §112, first paragraph is not equally applicable to claims 1-63 because these claims are directed to different embodiments of the invention, and the rejection does not provide specific grounds for why the claims are not enabled. Therefore, Applicants respectfully submits that the Office Action is not complete as to all matters because the Examiner has not clearly identified a ground of rejection for each rejected claim. For example, the rejection under 35 U.S.C. §112, first paragraph refers specifically only to claim 1. The Examiner has failed to provide specific reasons as to why the other independent claims 16 and 52, as well as all the dependent claims, are not enabled. Accordingly, it is respectfully submitted that these claims are in condition for allowance. In the event that claims 2-4, 6-54, and 56-67 are not allowed in the next communication, Applicant respectfully submits that the finality of the Office Action must be withdrawn and a new, non-final Office Action must be issued setting a new period for reply. (See M.P.E.P. §706.07).

FRANKEL ET AL. - 09/503,181
Client/Matter: 061047-0265650

On the merits, Applicants respectfully submit that the application amply describes the claimed subject matter by, among other things, clearly and fully describing the methods, computer hardware and computer software to enable a person skilled in the art to make and use the claimed invention without undue experimentation. In other words, the specification and drawings set forth in a clear, concise and exact manner methods, software and/or hardware that can be used to practice the claimed invention. For example, Applicants refer the Examiner to page 1, lines 19-24 and page 2, lines 2-7 of Applicants' specification for a description of how the claimed invention may be applied in a computer system using electronic data and electronic transactions.

Further, Applicants refer the Examiner to, for example, pages 9-11 of Applicants' specification where various technologies (e.g., database, authorization, cryptographic, communication, key management, public key infrastructure and certification authority technologies known in the art) that may be used to implement the claimed invention are described. Applicants then refer the Examiner to, for example, pages 14 and 15 of the Applicants' specification describing a key management layer and a layer on top of that comprising view and view management layers to define and manage entities. Pages 15 to 17 of Applicants' specification further describe, with reference to Figures 4 and 5, how these layers may be further implemented. Figure 5, for example, depicts schematically a database showing the relationships between roles, groups, entities and certificates. In other words, database and directory technologies are shown as examples for electronically representing entities in an organization. Figure 4 schematically depicts a view management component (software and interfaces managing the system) to associate entities with roles and groups and to manage the roles. Example functions of the view management component are described, for example, at pages 20 to 22 of Applicants' specification, which may be performed via a "traditional database management system familiar to the skilled in the art." (Applicants' specification, pg. 22, lines 1-2). Further, these functions may be accompanied by "actions related to certificate management at the role level (e.g., certificate creation, suspension, revocation, etc.). There are many ways to implement the above in the art." (Applicants' specification, pg. 22, lines 2-5).

The Examiner contends that Applicants' citations merely refer to the fact that various pieces of electronic hardware in an organization are involved and fail to provide any detail

FRANKEL ET AL. -- 09/503,181
Client/Matter: 061047-0265650

about how one of ordinary skill in the art is to implement and achieve the benefit Applicants claim. While Applicants have, for the purposes of a complete response, indicated the various hardware and/or software in an organization involved, Applicants have also pointed out the disclosure in Applicants' specification and drawings of how to make and use the claimed invention. Applicants refer to the just mentioned citations above for the details on such implementation. While the application does not include a source code or other detailed software implementation, Applicants' submit that it is unnecessary and not required under the law. Indeed, a patent application "need not teach, and preferably omits, what is well known in the art." M.P.E.P., section 2164.01. Applicants' invention may be implemented using any number of hardware and/or software technologies and the claimed invention is certainly not limited to the details of a particular hardware and/or software configuration. Rather, given the detailed functional specifications in the application, Applicants submit that a person skilled in the art could make and use the claimed subject matter without undue experimentation.

The Examiner further contends that Applicants' specification and drawings fail to adequately describe how to implement the invention of claim 1 by setting forth a number of questions the Examiner feels is unanswered by Applicants' specification and drawings. The first set of questions appears to overlook the language of claim 1. The claim does not specifically recite associating together two entities with cryptographic capabilities. Rather the claim language reads associating entities with cryptographic capabilities, which is clearly shown in, for example, Figure 3. The next sets of questions are addressed to the physical implementation of the claimed invention. As noted above, Applicants' specification and drawings amply describe how to make and use the claimed invention. Specifically, the claims and Applicants' specification and drawings describe how the claimed invention is implemented using computer technology. However, the Applicants' submit that the claimed invention is not limited, and not required to be limited under the law, to a particular computer technology or implementation and for that reason, is described generically in Applicants' specification and drawings.

In sum, Applicants' specification and drawings describe and explain how the claimed invention may be implemented using computer hardware and software. With the teachings in the application, such as the relational, state and flow diagrams, the associated disclosure in the specification and the specific description of applicable computer technology in the

FRANKEL ET AL. -- 09/503,181
Client/Matter: 061047-0265650

specification, a person skilled in the art should be able, without undue experimentation, to make and use the claimed subject matter. Applicants request the Examiner, to the extent not persuaded, to call the undersigned to discuss how Applicants' specification and drawings fail to provide sufficient information to a person skilled in the art to make and use the claimed subject matter.

Examiner further argues that "any subject matter illustrating how the method for control and maintenance may be implemented electronically are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure." At the outset, Applicants respectfully submit that the Examiner has failed to specify the subject matter that is "critical or essential" or provided any specific reasoning sufficient as a proper basis for this rejection. *See, e.g., In re Armbruster*, 185 USPQ 152 (CCPA 1975), *In re Lee*, 61 USPQ2d 1430 (Fed. Cir. 2002). Notwithstanding the rejection, Applicants submit that the specific subject matter illustrated in the specification and drawings to implement the claimed inventions are not critical or essential to the practice of the claimed invention. As would be appreciated by anyone skilled in the art, any computer hardware, computer software, or combination thereof may be used to practice the claimed method.

Therefore, for at least the above reasons, Applicants submit that claims 1-4, 6-54, and 56-67 are patentable under 35 U.S.C. §112, first paragraph. Thus, the rejection of the claims is traversed and claims 1-4, 6-54, and 56-67 are allowable.

Rejection under 35 U.S.C. §102(b)

The Office Action rejects claims 1-10, 13-39, 41-44, 47-57, 59 and 61-63 under 35 U.S.C. §102(b) as being unpatentable over Lampson et al., "Authentication in Distributed Systems: Theory and Practice", ACM Transactions on Computer Systems, Vol. 10, No. 4, Nov. 1992, pgs. 265-310. Applicants respectfully traverse the rejection because the teachings of Lampson et al. fail to disclose, teach or suggest all the features recited in combination in the rejected claims.

Again, Applicant notes that a plurality of claims should never be grouped together in a common rejection, unless that rejection is equally applicable to all claims in the group. Applicant points out that the rejection based on 35 U.S.C. §102(b) is not equally applicable to claims 1-10, 13-39, 41-44, 47-57, 59 and 61-63 because some of these claims are directed to

FRANKEL ET AL. - 09/503,181
Client/Matter: 061047-0265650

different embodiments of the invention for which that the rejection does not provide specific grounds as to how Lampson et al. renders those claims unpatentable under 35 U.S.C. §102(b). Therefore, Applicants respectfully submits that the Office Action is not complete as to all matters because the Examiner has not clearly identified a ground of rejection for each rejected claim. For example, the Examiner has failed to provide specific reasons as to why claims 10, 13-15, 24, 26, 28, 29, 35, 36, 39, 41, 51, and 55 are unpatentable under 35 U.S.C. §102(b). Accordingly, it is respectfully submitted that these claims are in condition for allowance. In the event that claims 10, 13-15, 24, 26, 28, 29, 35, 36, 39, 41, 51, and 55 are not allowed in the next communication, Applicant respectfully submits that the finality of the Office Action must be withdrawn and a new, non-final Office Action must be issued setting a new period for reply. (See M.P.E.P. §706.07).

Independent Claim 1

As noted in Applicants' specification, cryptographic representation of an organization has typically been defined statically, for a given time. But, such representation has limits especially in organizations facing structural or dynamic changes. Thus, Applicants' invention of claim 1 relates to control and maintenance of an operational organizational structure to solve, for example, management of dynamic organizations which often can face significant structural changes. To facilitate this control and maintenance, Applicants' method of claim 1 associates entities with cryptographic capabilities and organizes the entities within the organizational structure as roles. The claimed method further maintains (i.e., changes, updates, etc.) the roles within the organizational structure.

Lampson et al. merely disclose a theory of authentication and a system that implements it. The theory is based on the notion of principal and "speaks for" relation between principals. The theory shows how to reason about a principal's authority by deducing the other principals that it can speak for. In particular, they describe a system that passes principals efficiently as arguments or results of remote procedure calls, and handles public and shared key encryption, name lookup in a large name space, groups of principals, program loading, delegation, access control and revocation. Lampson et al., abstract. The teachings of Lampson et al. fail to at least disclose, teach or suggest a method for control and maintenance of an operational organizational structure as recited in claim 1 and its dependent

FRANKEL ET AL. - 09/503,181
Client/Matter: 061047-0265650

claims 2-4, 6-10, and 13-15. Rather, Lampson et al. is directed to a security system, particularly an authentication system.

For example, Applicants submit that Lampson et al. fail to disclose, teach or suggest "organizing entities within the organizational structure as roles through associating the electronic representations of entities with electronic representations of roles", entities which have associated cryptographic capabilities, as recited in claim 1. While Lampson et al. disclose an authentication system that may be applied to an organization, Lampson et al. fail to disclose any method of organizing entities with an organization as roles. The only roles Lampson et al. discuss are roles, for principals, that appear to be supplied to the authentication system of Lampson et al. *See, e.g.*, p. 268 of Lampson et al. as cited by the Office Action. Thus, while Lampson et al. discloses principals - entities in terms of the claimed method - having roles, Lampson et al. fail to disclose, teach or suggest any method for organizing principals within an organizational structure, let alone organizing those principals with roles. The roles of principals discussed in Lampson et al. appear to be predetermined and supplied to the authentication system of Lampson et al. *See, e.g.*, p. 268 of Lampson et al. The Examiner argues that regardless of whether roles of Lampson et al. are predetermined or not, the roles are indeed "organized". While Lampson et al. disclose that principals may have roles, it doesn't follow that Lampson et al. disclose or teach a method of organizing entities within the organizational structure as roles through associating the electronic representations of entities with electronic representations of roles. Indeed, Applicants submit Lampson et al. is very much silent on this and at most discloses an assignment of a role to a principal. Lampson et al. fail to disclose, teach or suggest any type of organization of entities as roles or any mechanism to organize entities as roles. Thus, Lampson et al. simply provide no disclosure, suggestion or teaching regarding organizing entities, entities which have associated cryptographic capabilities, within an organizational structure as roles as recited in claim 1.

Additionally, Lampson et al. fail to disclose, teach or suggest "upon any addition, deletion or modification of an entity, a cryptographic capability, or any of their associations, maintaining roles within the organizational structure by adding, deleting or modifying electronic representations of the entities, cryptographic capabilities, roles, or any of their associations" as recited in claim 1. As noted above, while the authentication system of

FRANKEL ET AL. -- 09/503,181
Client/Matter: 061047-0265650

Lampson et al. may be applied to an organization, Applicants submit there is no disclosure, suggestion, or teaching by Lampson et al. how their system or its operation can or does maintain roles within an organizational structure. Rather, the Lampson et al. system and its operation merely facilitates secure communication using principals as roles. See, e.g., p. 268 of Lampson et al.

Applicants submit that the Examiner has yet to respond to or acknowledge Applicants' argument regarding Lampson et al.'s failure to disclose, teach or suggest "maintaining roles within the organizational structure" as recited in claim 1 and as discussed in Applicants' Amendment filed March 29, 2004, Applicants' Response filed September 17, 2004, and Applicant's Submission filed December 17, 2004. Prior art must disclose or teach a claim as a whole. Applicants respectfully submit that Examiner has not considered claim 1 as a whole by ignoring the part of "maintaining roles within the organization structure" recited in claim 1 and thus a prima facie case of unpatentability has not been established. Examiner's repetition in substantially verbatim form of the rejection of claim 1 made in the first Office Action mailed October 28, 2003 is simply not sufficient or appropriate.

Further, the Examiner argues on page 4 of the Office Action that regardless of the type of control Lampson et al. discuss, the fact that Lampson et al. discuss access control, nevertheless renders it as a method of control. Applicants submit that simply misconstrues and ignores much of the claim language. Claim 1 is not simply a method of control. Rather, it is a method of control and maintenance of an operational organization structure. Access control is about allowing or denying access to something. For example, the operation of a door lock is an access control method. Access control (namely, which role, say, gets access to what part / data in the organization's physical and electronic structure) is simply an orthogonal issue to control and maintenance of the operational structure of an organization through organizing entities within an organization structure where entities are associated with roles (and are accordingly electronically represented). Organizations may have many control structures for operation but organizing by maintaining and controlling the structure of entities through their association with roles (in a cryptographic system employing electronic representation) is separate from other controls that may be integrated into or be employed on to that, such as access control and role action control. Moreover, authorization technology (such as discussed by Lampson et al.) is cited in Applicants' specification at page 10, lines 5-

FRANKEL ET AL. -- 09/503,181
Client/Matter: 061047-0265650

11 as technology that may be used as a component of or something to use on top of the claimed invention.

Therefore, Applicants respectfully submit that Lampson et al. fail to at least disclose, teach or suggest a method for control and maintenance of an operational organizational structure, comprising, *inter alia*, "associating electronic representations of entities with cryptographic capabilities", "organizing entities within the organizational structure as roles through associating the electronic representations of entities with electronic representations of roles", and "upon any addition, deletion or modification of an entity, a cryptographic capability, or any of their associations, maintaining roles within the organizational structure by adding, deleting or modifying electronic representations of the entities, cryptographic capabilities, roles, or any of their associations" as recited in independent claim 1 and its dependent claims 2-4, 6-10, and 13-15.

Independent Claim 16

Further, the teachings of Lampson et al. fail to at least disclose, teach or suggest a system for control and maintenance of an operational structure comprising, *inter alia*, transaction components to "maintain electronic representations of capabilities of entities", "maintain electronic representations of functions of entities", "maintain electronic representations of characteristics of entities", "maintain electronic representations of relationships of entities", and "change the maintained electronic representations of said entities said characteristics and said relationships upon an addition, deletion, or modification of a characteristic or relationship of the entities." as recited in independent claim 16 and its dependent claims.

Applicants submit that Lampson et al. provide no disclosure regarding "maintaining capabilities of entities", such as a role in an organization (*see, e.g.*, claim 19), "maintaining functions of entities", such as an operation by a functionary in an organization (*see, e.g.*, claim 22), "maintaining characteristics of entities", such as an entity's size, threshold for a quorum, or visibility (*see, e.g.*, page 21 of the specification) or "maintaining relationships of entities". As discussed above in respect of claim 1, while the authentication system of Lampson et al. may be applied to an organization, Applicants submit there is no disclosure, suggestion, or teaching by Lampson et al. how their system or its operation can or does

FRANKEL ET AL. - 09/503,181
Client/Matter: 061047-0265650

maintain capabilities, functions, characteristics and relationships of entities within organizations as recited in claim 16. Rather, the Lampson et al. system and its operation merely facilitates secure communication.

Applicants also submit that Lampson et al. fail to provide any disclosure, teaching or suggestion regarding "changing the maintained said entities said characteristics and said relationships" as recited in claim 16. While the Lampson et al. authentication system may be applied to an organization, all relevant data about such organization is merely supplied to and used by the authentication system of Lampson et al. There simply appears to be no disclosure, teaching or suggestion regarding changing maintained entities, characteristics and relationships within an organization. Applicants submit the discussions at pgs. 271-274 of Lampson et al. (as cited by the Office Action) regarding statements is inapposite. There, Lampson et al. set forth how they propose to handle statements in their system for the purposes of authentication. For example, they address how to handle circumstances where one principal makes a statement on behalf of another principal. There is no indication or suggestion of any sort that the statements referenced in Lampson et al. perform any type of changing maintained entities, characteristics and relationships within an organization. Lampson et al. merely discuss how to handle authentication of statements.

Moreover, with respect to independent claim 16 and its dependent claims 17-39, 41-44, and 47-51, the Examiner has not specifically responded to the arguments made in Applicants' Amendment filed March 29, 2004, Response filed September 17, 2004 and Submission dated December 17, 2004. Thus, the Examiner continues to fail to identify specific reasons why claim 16 and its dependents are unpatentable in view of Lampson et al., why Applicants' previous arguments are not persuasive, and why these claims are not allowable in view of those arguments and Lampson et al. Accordingly, Applicants respectfully submit that Examiner has not considered claim 16 as a whole and thus a prima facie case of unpatentability has not been established. Examiner's repetition in substantially verbatim form of the rejection of claim 16 made in the first Office Action mailed October 28, 2003 is simply not sufficient or appropriate.

Accordingly, the teachings of Lampson et al. fail to at least disclose, teach or suggest a system for control and maintenance of an operational structure comprising, *inter alia*, to "maintain electronic representations of capabilities of entities", "maintain electronic

FRANKEL ET AL. -- 09/503,181
Client/Matter: 061047-0265650

representations of functions of entities", "maintain electronic representations of characteristics of entities", "maintain electronic representations of relationships of entities", and "change the maintained electronic representations of said entities said characteristics and said relationships upon an addition, deletion, or modification of a characteristic or relationship of the entities." as recited in independent claim 16 and its dependent claims.

Independent Claim 52

Finally, the teachings of Lampson et al. fail to at least disclose, teach or suggest a system comprising "a maintenance system by which said database and said cryptographic authorities are maintained in coordination and by authorized parties assuring the representation of said organization and said cryptographic capabilities are soundly associated as defined by the coordination directives" and "maintenance transactions acting within said maintenance system, maintaining a view representing an organization" as recited in independent claim 52 and its dependent claims.

As discussed above, Lampson et al. disclose a security system. In an embodiment, the system of Lampson et al. may make use of a certification authority as is well known. With respect to such a certification authority, Lampson et al. disclose the traditional methods of key and certificate management (including issuance, revocation, etc.). *See, e.g.,* Lampson et al., pgs. 283-285. For secure communication, the Lampson et al. system simply relies on, for example, checking the integrity (e.g., expiry) of the certificates themselves or checking certificate revocation lists but does not address, for example, the basic issue of the proper association of an entity to a cryptographic capability. Thus, Applicants submit that Lampson et al., particularly at pg. 270, do not disclose, teach or suggest a maintenance system by which the database, representing entities of an organization and their characteristics, roles and relationships, and the cryptographic capabilities are maintained in coordination and by authorized parties assuring the representation of the organization and such that the cryptographic capabilities are soundly associated as recited in claim 52.

Further, Lampson et al. do not disclose, teach or suggest "maintenance transactions acting within said maintenance system, maintaining a view representing an organization" as recited in claim 52. As discussed above, Lampson et al. do not disclose any sort of maintenance system. Moreover, Lampson et al. do not disclose maintaining any sort of view

FRANKEL ET AL. - 09/503,181
Client/Matter: 061047-0265650

representing an organization. Page 270 of Lampson et al. merely discloses gathering of information and using algorithms to check whether to grant access. Applicants submit that there is just no indication that the gathering and checking corresponds to maintaining a view representing an organization.

Moreover, with respect to independent claim 52 and its dependent claims, the Examiner has not specifically responded to the arguments made in Applicants' Amendment filed March 29, 2004, Response filed September 17, 2004 and Submission dated December 17, 2004. Thus, the Examiner continues to fail to identify specific reasons why claim 52 and its dependents are unpatentable in view of Lampson et al., why Applicants' previous arguments are not persuasive, and why these claims are not allowable in view of those arguments and Lampson et al. Accordingly, Applicants respectfully submit that Examiner has not considered claim 52 as a whole and thus a prima facie case of unpatentability has not been established. Examiner's repetition in verbatim form of the rejection of claim 52 made in the first Office Action mailed October 28, 2003 is simply not sufficient or appropriate.

Accordingly, the teachings of Lampson et al. fail to at least disclose, teach or suggest a system comprising "a maintenance system by which said database and said cryptographic authorities are maintained in coordination and by authorized parties assuring the representation of said organization and said cryptographic capabilities are soundly associated as defined by the coordination directives" and "maintenance transactions acting within said maintenance system, maintaining a view representing an organization" as recited in independent claim 52 and its dependent claims.

Therefore, for at least the above reasons, Lampson et al. fail to disclose, suggest or teach all the features of claims 1-10, 13-39, 41-44, 47-57, 59 and 61-63, which claims are thus at least patentable under 35 U.S.C. §102 and 35 U.S.C. §103. The rejection of claims 1-10, 13-39, 41-44, 47-57, 59 and 61-63 is traversed and claims 1-10, 13-39, 41-44, 47-57, 59 and 61-63 are allowable.

Rejection under 35 U.S.C. §103(a)

Furthermore, the Office Action rejected claims 11, 12, 40, 45-46, 58 and 60 under 35 U.S.C. §103(a) as being obvious over Lampson et al. As Applicants submit above that

FRANKEL ET AL. -- 09/503,181
Client/Matter: 061047-0265650

independent claims 1, 16, and 52 are novel and non-obvious in view of Lampson et al., Applicants accordingly submit that claims 11, 12, 40, 45-46, 58 and 60, which respectively are directly or indirectly dependent from independent claims 1, 16 and 52, are therefore not obvious. In respect of claim 60, the Office Action suggests it as being obvious over Lampson et al. in view of the Unified Modeling Language Version 1.0 (January 13, 1997) ("UML specification"). The UML specification, on its own or in combination with Lampson et al., plainly fails to provide any disclosure, teaching or suggestion regarding independent claim 52, let alone dependent claim 60. Thus, for at least the above reasons, Lampson et al. fail to disclose, suggest or teach all the features of claims 11, 12, 40, 45-46, and 58 and Lampson et al., alone or in combination with the UML specification, fail to disclose, suggest or teach all the features of claim 60. Thus, the rejection of claims 11, 12, 40, 45-46, 58 and 60 is traversed and claims 11, 12, 40, 45-46, 58 and 60 are allowable.

New Claims 64-67

New claims 64 and 66 find support in, for example, pages 22-27 of the specification. New claims 65 and 67 find support in, for example, page 5, lines 20-25, page 20, lines 15-19, page 21, lines 12-13, and page 27, lines 1-6. As Applicants submit above that independent claims 1 and 16 are patentable in view of Lampson et al., Applicants accordingly submit that claims 64 and 66, which are dependent from independent claim 1, and claims 65 and 67, which are dependent from independent claim 16, are therefore patentable. Thus, claims 64-67 are allowable.

All rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance. If questions relating to patentability remain, the examiner is invited to contact the undersigned to discuss them.

FRANKEL ET AL. -- 09/503,181
Client/Matter: 061047-0265650

Should any fees be due, please charge them to our deposit account no. 03-3975, under our order no. 061047/0265650. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced deposit account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP



Jean-Paul Hoffman

Reg. No. 42663

Tel. No.: 703-905-2094

JGH
P.O. Box 10500
McLean, VA 22102
Tel. No.: 703-905-2000
Fax No. 703-905-2500